



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY - 7 2019

ACTION MEMORANDUM

SUBJECT: Request for a Ceiling Increase and Change of Scope for Continuation of a Removal Action at Galey & Lord Society Hill Plant Site, Society Hill, Darlington County, South Carolina

FROM: Serdar Ertep, Federal On-Scene Coordinator
Emergency Response, Removal, Prevention, and Preparedness Branch

THRU: James W. Webster, Ph.D., Chief
Emergency Response, Removal, Prevention, and Preparedness Branch

TO: Franklin E. Hill, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) is to request and document approval for a removal action described herein for the Galey & Lord Society Hill Plant Site (the Site) located in Society Hill, Darlington County, South Carolina. The Site poses a threat to public health and the environment that meets *National Oil and Hazardous Substances Pollution Contingency Plan section* §300.415(b)(2) criteria for removal actions. If approved, the total extramural ceiling for the removal will be \$1,932,848, which will be funded through the Emergency Response, Removal, Prevention, and Preparedness Branch (ERRPPB) Advice of Allowance.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: SCD058189622
Site ID#: C433
Lat/Long: 34.525036° by -79.837463°
Removal Type: Fund-lead, Time-Critical

A. Site Description

1. Removal Site Evaluation

The South Carolina Department of Health and Environmental Control (DHEC) referred the Site to the U.S. Environmental Protection Agency Region 4 ERRPPB for a Removal Site



Evaluation (RSE) in November 2017. The RSE performed by ERRPPB consisted of a Removal Preliminary Assessment and a Removal Site Inspection.

a. Removal Preliminary Assessment

The Site is a defunct and abandoned former textile dye and finishing facility located on approximately 234 acres. According to information provided by DHEC, the property was originally developed in 1965 by Klopman Mills, a division of Burlington Industries. Burlington sold the facility to Galey & Lord Inc. in 1987. Galey & Lord Inc. sold the property to Patriarch Partners, LLC, in 2004; thereafter ownership of the facility was transferred back to Galey & Lord. Operations at the Site ended in the summer of 2016.

The Site contains two buildings (Plant I and Plant II), a boiler house, two coal storage areas, a coal runoff pond, a water treatment plant, a wastewater treatment plant, and several chemical and oil storage areas. The wastewater treatment plant (WWTP) includes a 20 million-gallon (MG) lagoon, three equalization tanks (2 MG each), three aeration tanks (2.56 MG each), a 17,200-gal flash mix tank, a 107,700-gal flocculation tank, two 850,000-gal clarifiers, a 0.2-acre digester and a 3.1-acre sludge storage pond. All water tanks, treatment vessels and impoundments in the WWTP remain full or nearly full to capacity.

Historic contamination at the Site identified by DHEC includes: a chromic acid pit, two small landfills and groundwater contamination. A pump and treat system that had been installed to address groundwater contamination ceased operating when the facility closed in 2016.

DHEC visited the Site in October 2016 and observed several tanks, drums and totes which were full or partially full. DHEC again visited the Site in 2017 and observed active scrapping and demolition activities. DHEC also documented that the tanks, drums and totes had not been fully addressed. Based on the presence of these containers and hazardous materials, DHEC requested that the EPA Region 4 conduct a Removal Site Evaluation (RSE).

b. Removal Site Inspection

On February 22, 2018, the ERRPPB conducted a Site Inspection and documented the following conditions:

- At least 300, 55-gallon drums and approximately 100 totes, and an undetermined number of cylinders and other containers scattered throughout the Site buildings. Based on facility records, some of these contain dyes, caustics, acids and oxidizers.
- Several dozen above ground storage tanks (AST) including an 800,000-gallon tank approximately 50% full of 5% Caustic (sodium hydroxide solution). A 12-inch pipe discharging industrial wastewater to a storm drain that empties into the Great Pee Dee River. The rate of discharge was estimated at approximately 4,000

gallons per day. The pipe was sealed, and the tank valve was closed, reducing the discharge rate to an intermittent drip. Analysis of a water sample collected during the RSE did not yield elevated concentrations of volatile and semi-volatile organic compounds.

- Suspected asbestos-containing material (ACM) was observed throughout the building identified as Plant I. In addition, suspected ACM has also been identified at the lands surface around Plant I. Suspected ACM was observed piled outside the Boiler House and in an open area located between Plant II and the tank area.
- A mercury spill inside a former cafeteria in Plant I.
- Evidence of scavenging such as removal of copper and other metals from the WWTP and other areas around the Site.

On February 12, 2019, the ERRPPB revisited the Site and observed the following:

- Scavenging had increased significantly since the last Site visit. Cable and chains placed to secure the facility had been cut to gain access.
- Some drums have been compromised and were leaking.
- A 6,000-gallon AST containing ammonia hydroxide solution was off-gassing. This tank was $\frac{3}{4}$ full at the time of the visit.
- As an apparent result of vandalism, a 250-gallon tote containing anti-foaming agent had released its content in the soil.
- A trench had been cut through the secondary containment berm around the tank farm containing the 800,000-gallon tank partially filled with sodium hydroxide solution. The four tanks in this area contain more than 500,000 gallons of caustics liquids. As a result, rainwater collected in the containment area could flow freely outside the containment area into a nearby storm drain.
- One of the 2.56 million-gallon wastewater aeration tanks was full to capacity and showed signs of corrosion.

2. Physical Location

The Site is located at 670 North Main Street, Society Hill, Darlington County, South Carolina (Figure 1). The geographical coordinates for the Site are latitude 34.525036° longitude -79.837463°.

3. Site Characteristics

The 234-acre site is bordered to the east by the Great Pee Dee River, to the north by Cedar Creek, to the west by undeveloped land and residential property, and to the south by Society Hill's North Main Street (Figure 2).

The Site is zoned for industrial use and as discussed in Section II.A.1, contains two primary plant buildings (Plant I and Plant II), multiple tanks and infrastructure. Plant I, constructed in 1965, is approximately 527,000 square feet. Plant II is approximately 250,000 square feet and was built in 1969 (Figure 3).

The nearest residence lies approximately 200 feet from the fence line, south of the Site along North Main Street (Highway 15-401). About 20 other residences are located within 1,000 feet of the facility entrance. The approximate population within 1-mile around the Site is around 171.

The majority of surface water runoff from the Site enters directly into the Great Pee Dee River. The northernmost portion of the Site drains into Cedar Creek, which also flows to the Great Pee Dee River. The Site's former National Pollution Discharge Elimination System (NPDES) discharge to the River is adjacent to the wastewater treatment plant just upstream of Highway 52 bridge. A commercial agriculture surface water intake is approximately two miles downstream of the Site.

The Great Pee Dee River is a recreational fishery. The River is a critical habitat to the Atlantic Sturgeon (*Acipenser oxyrinchus*) and Shortnose Sturgeon (*Acipenser brevirostrum*), both federally endangered species.

A water well survey of residential areas adjacent to the Site conducted by DHEC found that all houses are connected to the public water supply. Society Hill obtains water from Darlington County. Darlington County utilizes groundwater wells that are located greater than four miles from the Site. There are two public well systems located between three to four miles from the Site. One provides water to a summer camp that services approximately 100 people on and off while camping is ongoing. The other is a small rural system that utilizes four wells and serves about 1,600 residents.

4. Release or threatened release into the environment of a hazardous substance or a pollutant or contaminant

Sodium Hydroxide and Acetic Acid are listed as CERCLA hazardous substances in Title 40 of the Code of Federal Regulations Section 302.4.

The RSE Site Inspection conducted on February 22, 2018, documented large quantities of hazardous substances including caustics, acids and oxidizers at the Site which have been abandoned in tanks, drum and other containers.

5. NPL Status

The Site is being evaluated under the Hazard Ranking System but is not currently proposed for the National Priorities List (NPL).

6. Maps, Pictures and Other Graphic Representations

Maps and figures are attached to this Action Memorandum as well as available as part of the Site record.

B. Other Actions to Date

1. Previous Actions

The EPA Removal Site Inspections in February 2018 and February 2019 are described in Section II.A.1.b (Site Inspection).

On March 6, 2019, ERRPPB On-Scene Coordinators met with DHEC and a private asbestos contractor to assess the extent of the asbestos contamination at the Site. During the visit, continued off-gassing of ammonia from the previously described AST was observed. Containers of suspected combustible materials were also observed in a partially flooded storage room.

On March 25, 2019, the EPA mobilized Emergency and Rapid Response Services (ERRS) and Superfund Technical Assessment and Response Team (START) resources to secure the abandoned facility, control the release of ammonia, secure the combustible materials storage room, repair secondary containment around the primary AST tank farm and collect samples for waste characterization. The Site was secured by placing concrete barricades on all property access roads. The ammonia release was mitigated by closing an open valve, locking the valve and removing the manual opening mechanism. The containment was repaired by backfilling the breach and dewatering the interior of the secondary containment.

2. Current Actions

Asbestos abatement was initiated on April 29, 2019, through DHEC's voluntary cleanup program. This action is not part of the CERCLA removal response and is being conducted with DHEC oversight.

C. State and Local Authorities' Role

1. State and Local Actions to Date

In the early 1980s, DHEC discovered a small pit (~200 ft²) behind Plant II was being used to dispose of chromic acid. Laboratory analytical results of soil samples collected from the pit indicated high concentrations of chromium, lead and manganese. DHEC database records indicate that the acid pit was excavated and remediated. This Site was called the Burlington Industries/Klopman Acid Pit (SCD 058 189 622), which is a part of the larger Galey & Lord Site. The Site received a Preliminary Assessment in 1983 and a Site Inspection in 1984.

An environmental assessment conducted in 1988 revealed chlorinated solvent contamination of the groundwater at the Site. Groundwater contamination was determined to be coming from three main source areas. The company entered into a Voluntary Cleanup Contract (VCC) with DHEC in 2013. As part of the VCC, Galey & Lord would operate a soil vapor extraction (SVE) system along with a recovery well that pumped contaminated groundwater to the on-site WTP for treatment. Remediation actions ceased at the Site in approximately 2015. DHEC terminated the VCC with Galey & Lord in 2017.

DHEC conducted an asbestos survey and sampling in March 2018. During the survey ACM was found throughout Plant I and several locations around Plant I, Plant II and the Boiler House. DHEC inspectors collected 64 samples during the survey. Of the 64 samples, five were identified as being composed of greater than 1% asbestos. These positive samples were obtained from Plant I, adjacent to the Boiler House and in the area between Plant II and the Tank Area.

DHEC began an ESI in the spring of 2018. The Department conducted environmental sampling at the Site during the weeks of June 4 and June 11, 2018 (Figure 4). Seven groundwater samples were collected from monitoring wells located at the Site along with five groundwater samples taken from temporary monitoring wells. Twenty soil samples, three surface water and sediment samples from the Grand Pee Dee River, and one surface water and sediment sample from Cedar Creek were collected and compared to a corresponding control sample, which was collected from outside of potential site influences. Twenty sediment/source samples and 11 waste/source water samples were collected for source characterization from the WTP area. Several per and polyfluoroalkyl substances (PFAS), notably perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) were detected in the source water samples.

2. Potential for Continued State and Local Response

DHEC will continue the ongoing asbestos abatement independently of the proposed removal actions. In addition, DHEC will continue with NPL evaluation process.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

A. Threats to Public Health or Welfare

Samples collected confirm the presence of hazardous substances at the Site which has effectively been abandoned. Tanks and other containers show evidence of corrosion.

Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) lists factors to be considered in determining the appropriateness of a removal action. Paragraphs (b)(2)(i), (ii), (iii), and (vii) directly apply to the Site:

300.415(b)(2)(i): Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants. The EPA has documented the presence of at least 300 drums, approximately 100 other totes, cylinders and other containers at the Site, many of which contain suspected hazardous substances including at least 400,000 gallons of sodium hydroxide solution with pH of 14 and 3,000 gallons of acetic acid with pH of 0. A tank inventory and assessment identified 31 tanks containing at least some material. Tanks and other containers show evidence of corrosion which, if not addressed may result in further deterioration and potentially a release of hazardous substances into the environment including the Great Pee Dee River which is a drinking water source, recreational waterway and known to be a critical habitat for the endangered *Atlantic and Shortnose Sturgeon*. Releases from the Site may also

pose a hazard to nearby human populations. As previously noted, there are approximately 20 residences within 1,000 feet of the Site.

300.415(b)(2)(ii): Actual or potential contamination of drinking water supplies or sensitive ecosystems. Tanks and other containers show evidence of weathering and corrosion which may result in compromised integrity and release to the environment including the Great Pee Dee River, which is a source of drinking water for the City of Florence, South Carolina. The River is also a critical habitat for endangered or threatened species.

300.415(b)(2)(iii): Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release. The EPA has documented the presence of at least 300 drums, approximately 100 totes, cylinders and other containers at the Site as well as 31 ASTs that are at least partially full, including an 800,000-gallon AST containing an estimated 400,000 gallons of sodium hydroxide solution having a pH of 14. Failure of any of these containers through deterioration over time or through accidental or intentional human action could cause uncontrolled releases of hazardous substances.

300.415(b)(2)(vii): The availability of other appropriate federal or state response mechanisms to respond to the release. The State of South Carolina does not currently have resources to complete a response or removal action at the Site in a timely manner.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

The proposed removal action is a continuation of the response action initiated by the EPA on March 25, 2019, as a time-critical removal. The removal action will consist of two phases. Phase I will focus on neutralization and disposal of approximately 500,000 gallons of caustic liquids stored in several ASTs, hazard characterization of remaining containers and a mercury assessment and removal in cafeteria room. Phase II will focus on consolidation of wastes stored in various containers scattered throughout multiple labs and storage rooms, characterization, transportation and disposal of consolidated waste at an EPA-approved facility and disposal of the contents in an aeration tank if needed.

Proposed actions described below cover only the Phase I portion of the removal action as additional sampling is necessary to fully characterized material located inside of buildings, which cannot be performed pending abatement of asbestos under the State Voluntary Cleanup Program.

1. Proposed Actions Descriptions

The scope of the removal action proposed under this Action Memorandum is as follows:

- Provide for access to the Site and control access to the Site during removal activities;
- Conduct assessment and mercury removal in cafeteria room;
- Move and/or remove drums and other containers to allow safe access to portions of the Site being addressed;
- Inventory and perform hazard characterization on all substances contained in tanks, drums, totes and containers;
- Conduct neutralization of caustics and disposal of treated material;
- Transport and dispose of any materials that may contain hazardous substances, generated as a result of the removal actions, at an EPA-approved facility;
- Prepare a site-specific Health and Safety Plan;
- Prepare a site-specific Quality Control/Quality Assurance (QA/QC) plan;
- Prepare a site-specific sampling and waste characterization plan; and
- Maintain Site security and limit access during implementation of the removal action.

2. Contribution to Remedial Performance

The proposed removal action is warranted to address the threats discussed in Section III, which meet the NCP Section 300.415 (b)(2) removal criteria. The removal action contemplated in this Action Memorandum would be consistent with any remedial action.

3. Description of Alternative Technologies

Alternative technologies have not been evaluated for this Site. Waste from tanks, drums and other containers may be treated and/or disposed off-site once material has been consolidated and profiled for disposal.

4. Engineering Evaluation/Cost Analysis (EE/CA)

This proposed action is time-critical and does not require an EE/CA.

5. Applicable or Relevant and Appropriate Requirements (ARARs)

An ARAR request letter was sent to the State of South Carolina on April 18, 2019, requesting identification of any State ARARs for the EPA's consideration prior to initiation of the on-site response action activities.

In accordance with the NCP at 40 CFR § 300.415(j), on-site removal actions conducted under the CERCLA are required to attain applicable or relevant and appropriate requirements (ARARs) to the extent practicable considering the exigencies of the situation or provide grounds for invoking a CERCLA waiver under Section 121(d)(4). In determining whether compliance with

ARARs is practicable, the lead agency may consider appropriate factors, including (1) the urgency of the situation; and (2) scope of the removal action to be conducted. Additionally, under 40 CFR 300.405(g)(3), other advisories, criteria or guidance may also be considered (so-called To-Be-Considered or TBC) when conducting the removal action.

Under CERCLA Section 121(e)(1), federal, state or local permits are not required for the portion of any removal or remedial action conducted entirely on-site as defined in 40 CFR § 300.5. See also 40 CFR §§ 300.400(e)(1) & (2). On-site means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action. On-site response actions must comply, to the extent practicable, with substantive but not administrative requirements of ARARs. Off-site activities such as transportation and disposal of wastes are required to comply with all applicable requirements, including the administrative portions.

As provided in CERCLA Section 121(d)(3) and the Off-site Rule at 40 CFR 300.440 *et seq.*, the off-site transfer of any hazardous substance, pollutant or contaminant generated during the response action will be sent to a treatment, storage or disposal facility that is in compliance with applicable federal and state laws and has been approved by the EPA for acceptance of CERCLA waste.

6. Project Schedule

Upon approval of this Action Memorandum and funding for this proposed removal action, initial removal activities will begin within 30 days. This removal action will take approximately 12.5 weeks of on-site work to complete.

B. Estimated Costs

	<u>Current</u>	<u>Increase</u>	<u>Total</u>
Extramural Costs			
Regional Allowance			
ERRS	\$200,000	\$1,245,654	\$1,445,654
Non-Regional Allowance			
START	\$ 30,000	\$ 156,719	\$ 186,719
Subtotal Extramural Cost	\$230,000	\$1,402,373	\$1,632,373
Extramural Contingency	\$ 20,000	\$ 280,475	\$ 300,475
Total Removal Action	\$250,000	\$1,682,848	\$1,932,848
Project Ceiling			

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If action is not taken to mitigate the threats described within this document, Site conditions will continue to deteriorate and the likelihood that a release of hazardous substances to the environment will continue. Release of hazardous substances from the Site pose a threat to nearby populations and the environment, including the Great Pee Dee River.

VII. OUTSTANDING POLICY ISSUES

There are currently no identified outstanding policy issues.


VIII. ENFORCEMENT

Enforcement activities have been initiated and are ongoing. It is expected that this Site will be conducted as a fund-lead removal action. See Attachment A, "Enforcement Addendum" for more details.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Galey & Lord Society Hill Plant Site in Society Hill, Darlington County, South Carolina, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. The document is based on the Administrative Record for the Site. Conditions at the Site meet NCP Section 300.415 criteria for a removal action, and I recommend your approval for the continuation of removal action.

APPROVED: _____


Franklin E. Hill, Director
Superfund & Emergency Management Division

DATE: _____

5/7/19

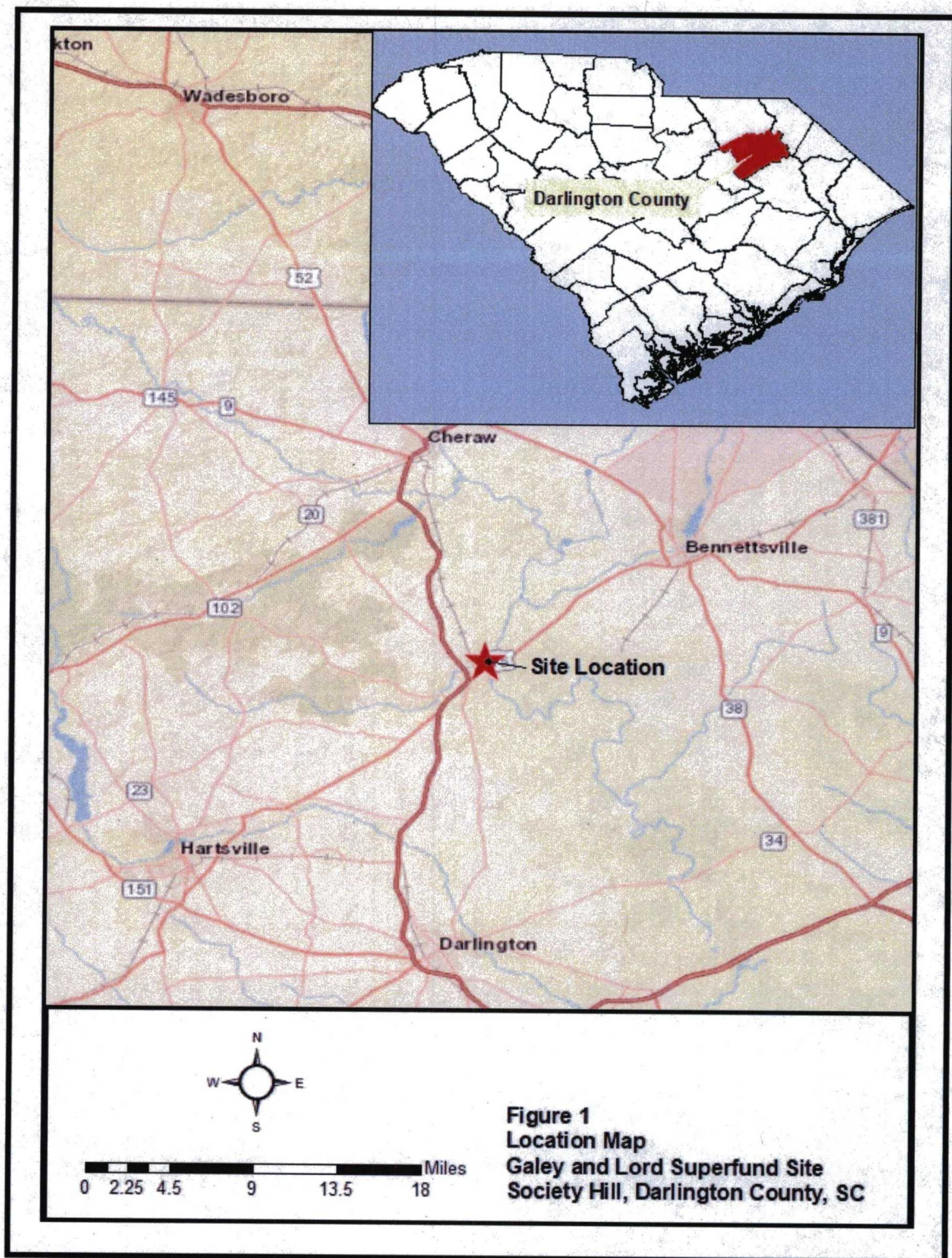
DISAPPROVED: _____

Franklin E. Hill, Director
Superfund & Emergency Management Division

DATE: _____

Attachments

Appendix I



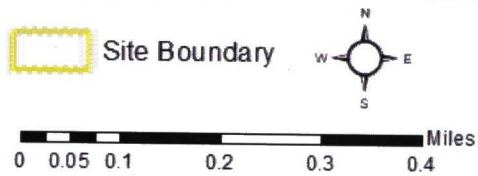
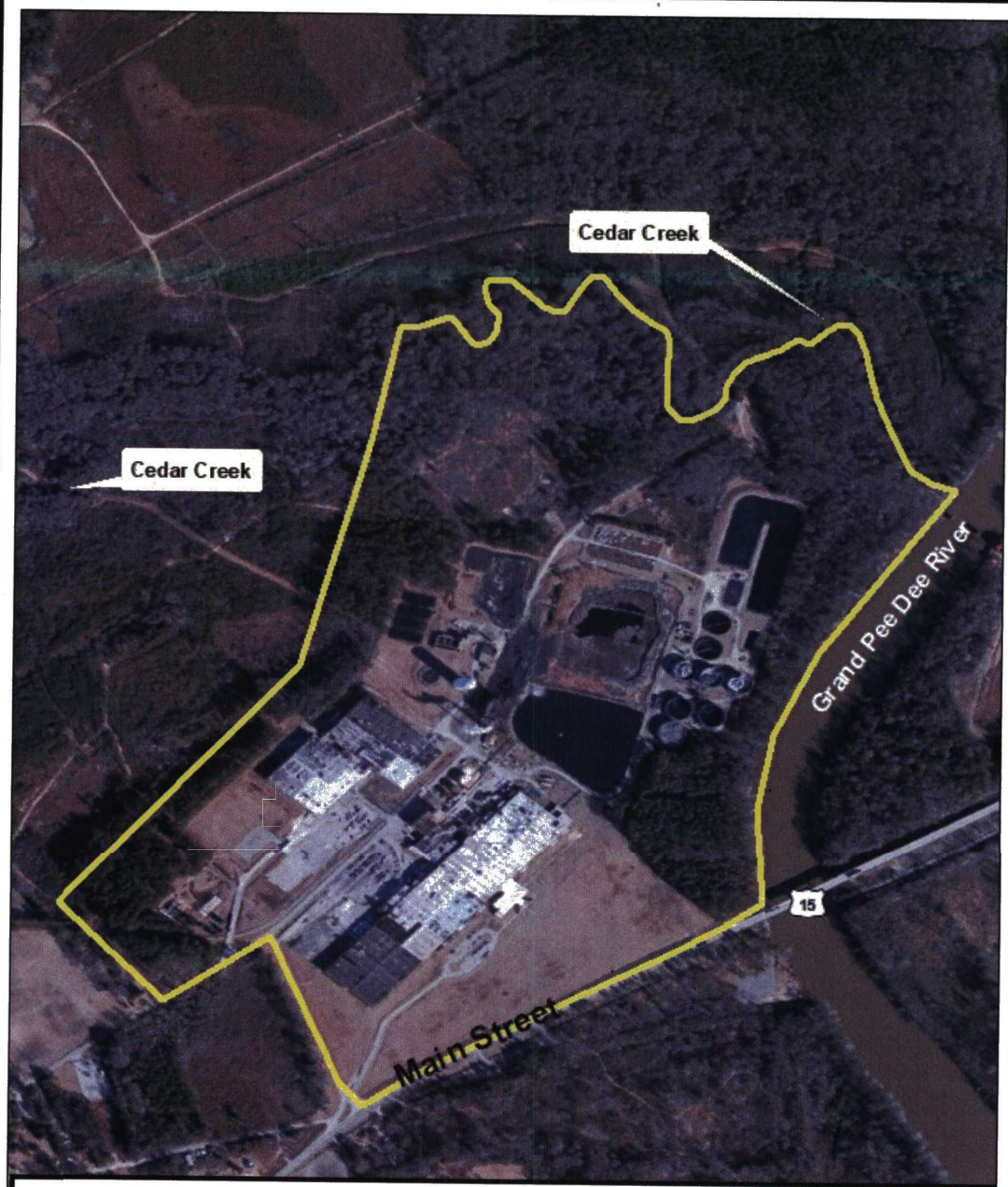


Figure 2
Site Map
Galey and Lord Superfund Site
Society Hill, Darlington County, SC





Note: Due to the CONFIDENTIAL nature of the material, the Enforcement Addendum has been withheld. Withheld material is available, for Judicial review only, at EPA Region 4, Atlanta, Georgia.